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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,277	07/14/2000	KLAUS-DIETER HAMMER	051009/0125	1514
22428	7590	01/19/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			SIMONE, CATHERINE A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

12

Office Action Summary

Application No.

09/600,277

Applicant(s)

HAMMER ET AL.

Examiner

Catherine Simone

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-16 and 18-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16 and 18-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13, 18-30 and 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,928,737) in view of Bastioli et al. (WO 92/19680).

Regarding claims 13 and 42-44, Hammer et al. discloses a seamless, tubular food casing which is blown in an area ratio from 1:2 to 1:10 (see col. 2, lines 19-23), produced from a thermoplastic mixture which comprises a) thermoplastic starch (see col. 2, lines 16-18) and b) at least one other polymer (see col. 3, lines 49-54) wherein a weight ratio of a:b is in a range from 90:10 to 10:90 (see col. 3, lines 54-56). However, Hammer et al. fails to disclose the at least one other polymer being selected from the group consisting of polyesterurethane and of a homo- or copolymer comprising hydroxycarboxylic acid units.

Bastioli et al. teaches that it is old and well-known in the art to have a starch mixed with hydroxycarboxylic acid units (see pages 2-3) and polyesterurethane (see page 27, examples 9-16) for the purpose of producing a film with a high biodegradation rate and having improved mechanical properties and/or improved resistance to water and improved low permeability to water vapour.

Art Unit: 1772

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the polymer of the thermoplastic mixture in Hammer et al. to be a polymer selected from the group consisting of a homo- or copolymer comprising hydroxycarboxylic acid units and polyesterurethane as suggested by Bastioli et al. in order to produce a food casing with a high biodegradation rate, improved mechanical properties, improved resistance to water and improved low permeability to water vapour.

Regarding claims 18 and 19, the weight ratio a:b appears to be in the range from 20:80 to 80:20 and in the range 40:60 to 60:40 (see col. 3, lines 54-56). Regarding claims 20 and 21, note plasticizer (see col. 3, lines 1-4) and a weight percent being up to 30% (see col. 3, lines 8-19). Regarding claim 22, note the proportion of plasticizer present in the thermoplastic mixture is up to 15% by weight (see col. 3, lines 8-19). Regarding claims 23 and 24, note one lubricant (see col. 3, lines 64-67) and a weight percent being up to 12% (see col. 4, lines 3-5). Regarding claims 25 and 26, note the proportion of lubricant present in the thermoplastic mixture is from 2 to 6% by weight based on the total weight of the thermoplastic mixture (see col. 4, lines 3-5). Regarding claims 27 and 28, note the thermoplastic mixture is mixed with fibers (see col. 3, lines 42-45) and a weight percent being up to 25% (see col. 3, lines 44-47). Regarding claims 29 and 30, note the proportion of fibers present in the mixture is from 2 to 15% by weight based on the total weight of the mixture (see col. 3, lines 44-47). Regarding claims 35 and 36, note crosslinker (see col. 3, lines 60-63) and a weight percent being up to 20% (see col. 3, lines 34-36 and 58-61). Regarding claims 37 and 38, note the crosslinker present in the thermoplastic mixture is from 0.5 to 10% by weight based on the total weight of the mixture (see col. 3, lines 58-61). Regarding claim 39, note the food casing is provided with an internal preparation and/or external

Art Unit: 1772

preparation (see col. 41-44). Regarding claim 41, the food casing of Hammer et al. is used as a synthetic sausage casing (see col. 1, lines 35-36).

In regard to claim 40, it is a process limitation and process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113. In this case, the limitation “extruding the thermoplastic mixture through an annular die and blowing it in an area ratio of from 1:2 to 1:10” is a method of production and therefore does not determine the patentability of the product itself.

3. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (5,928,737) in view of Bastioli et al (WO 92/19680) and in view of Bengs et al. (6,406,530).

Hammer et al. in view of Bastioli et al. discloses the claimed invention as shown above except for a starch ester comprising a starch acetate. Bengs et al. teaches it is old and well-known in the art to have a starch ester comprising a starch acetate (see col. 6, lines 8-13) mixed with a biodegradable polymer for the purpose of producing a biodegradable film with improved mechanical properties. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the starch in Hammer et al. to be a starch ester comprising a starch acetate as suggested by Bengs et al. in order to form a biodegradable food casing with improved mechanical properties.

4. Claims 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (5,928,737) in view Bastioli et al. (WO 92/19680) and in view of Buehler et al. (5,346,936).

Hammer et al. in view of Bastioli et al. discloses the claimed invention as shown above except for fillers present in the thermoplastic mixture up to 12% by weight based on the total weight of the mixture. Buehler et al. teaches that it is old and well-known in the art to have fillers

present up to 12% by weight based on the total weight of the mixture (see col. 4, lines 15-19) for the purpose of producing a biodegradable starch/polymer mixture having a long shelf life in granular form and is resistant to moisture. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the thermoplastic mixture in Hammer et al. with fillers of up to 12% by weight on the total weight of the thermoplastic mixture as suggested by Buehler et al. in order to produce a biodegradable food casing having a long shelf life in granular form and is resistant to moisture.

Response to Arguments

5. Applicant's arguments filed 11/14/05 have been fully considered but they are not persuasive.

Applicant argues, "Bastioli fails to disclose the polyesterurethanes, polyetherurethanes and the further polymers recited in present claim 13. Food casings produced from a composition comprising any of these polymers hence cannot be rendered obvious by a combination of Hammer and Bastioli".

However, as shown in the rejection above, Bastioli also teaches polyesterurethane (see page 27, examples 9-16) as the polymer component. Therefore, Bastioli teaches a biodegradable polymeric composition comprising a starch based component and polyesterurethane for the purpose of producing a film with a high biodegradation rate and having improved mechanical properties and/or improved resistance to water and improved low permeability to water vapour. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the polymer of the thermoplastic mixture in Hammer et al.

Art Unit: 1772

to be of a polyesterurethane as suggested by Bastioli et al. in order to produce a food casing with a high biodegradation rate, improved mechanical properties, improved resistance to water and improved low permeability to water vapour. One skilled in the art would clearly be able to modify the polymer in Hammer et al. to be of a polyesterurethane in order to produce a food casing with a high biodegradation rate, improved mechanical properties, improved resistance to water and improved low permeability to water vapour, if so desired.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.


Art Unit: 1772

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Catherine A. Simone
Examiner
Art Unit 1772
January 13, 2006



HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/17/06